

Remarks:

Claims 1 - 15 are pending in the present application. Claims 1-15 are rejected. Claim 13 is objected to. Claim 13 is amended.

Claim Objections

Claim 13 is objected to on the grounds that the word "cylinder" is spelled as "cyclinder" and the examiner has suggested changing the word to "cylinder". Applicant have amended claim 13 as suggested by the examiner. Therefore, applicants respectfully request withdrawal of the objection.

Claim Rejection Under 35 U.S.C. § 102

Claims 1-4,6, 10 and 11 are rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent 4,107,233 to Ochiai. Applicants respectfully traverse the rejection of the claims.

Applicants invention is directed to a method for repairing a protective lining by identifying combined areas of the lining having a thickness below a pre-determined threshold value using a measuring device and a processing unit. The measuring device measures the residual thickness of the lining. The processing unit in a first step (1) transforms the residual thickness data into binary data, by comparing the measured residual thickness data with the predetermined threshold value for the thickness of the lining, assigning the binary value "1" to areas of the lining having a thickness below the pre-determined threshold value, and the binary value "0" to areas of the lining having a thickness equal or higher than the pre-determined threshold value, or vice versa. In a second step (2), isolated areas of the lining having a thickness below the pre-determined threshold value are combined into combined areas of the lining and are assigned the same binary value as for areas of the lining have a thickness below the predetermined threshold value. In a third step (3), the processing unit computes the position and repair sequence of each of the combined areas and transfers these data to a repair device which applies monolithic lining material onto the combined areas.

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Applicants submit that the Ochiai reference fails to teach at least one claimed feature of applicants invention. Applicants submit that the step of combining isolated areas of the lining having a thickness below the pre-determined threshold value are combined into combined areas of the lining to which the assigned binary value for areas of the lining have a thickness below the predetermined threshold value. These combined areas are assigned the same binary value as for areas of the lining have a thickness below the predetermined threshold value. This is described in paragraph 13 and 19 of the published application.

Therefore, it is submitted that the rejected claims 1-4, 6, 10 and 11 are not anticipated by Ochai for the reasons stated above. Reconsideration of the rejected claims 1-4, 6, 10 and 11 and their allowance are respectfully requested.

Claim Rejection Under 35 U.S.C. § 103

Claims 5 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable for allegedly being obvious over U.S. Patent 4,107,233 to Ochiai. Applicants respectfully traverse the rejection of the claims.

In the rejection on page 5 it is stated that claims 5 and 7 which depend from claim 1 are rendered obvious by Ochiai. In the rejection the examiner admits that Ochiai is silent as to whether a ladle is being repaired in the Ochiai reference and whether Ochiai discloses using a laser-based measuring device. It is then stated that one of ordinary skill in the art would use the operation of Ochiai to repair ladles and use a mirror scanner. Applicants submit that in view of the above modifications of the Ochiai reference one of ordinary skill in the art still would not have arrived at applicants invention as the combination still lacks the claimed feature of a step of combining isolated areas into combined areas which are assigned a binary value the same as the isolated areas. Therefore, reconsideration of the rejected claims 5 and 7 and their allowance are respectfully requested.

Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable for allegedly being obvious over U.S. Patent 4,107,233 to Ochiai in view of U.S. Patent 4,690,328 to Roehl. Applicants respectfully traverse the rejection of the claims.

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In the rejection on page 6, the Roehl reference has been combined with the Ochiai reference on the grounds that Roehl allegedly teaches a tilting mechanism for a device applying refractory material and a spray nozzle. Applicants submit that in view of the above modifications of the Ochiai reference by the Roehl reference one of ordinary skill in the art still would not have arrived at applicants invention because the above claimed feature of a step of combining isolated areas into combined areas which are assigned a binary value the same as the isolated areas is still not present in the combination. Therefore, reconsideration of the rejected claims 8 and 9 and their allowance are respectfully requested.

Claims 12 to 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable for allegedly being obvious over U.S. Patent 4,107,233 to Ochiai in view of Published U.S. Patent Application 2002/0158,368 to Wirth. Applicants respectfully traverse the rejection of the claims.

In the rejection on page 7, the Wirth reference has been combined with the Ochiai reference on the grounds that Wirth allegedly teaches a rectangular or cylindrical coordinate system. Applicants submit that in view of the above modifications of the Ochiai reference by the Wirth reference one of ordinary skill in the art still would not have arrived at applicants invention because the above claimed feature of a step of combining isolated areas into combined areas which are assigned a binary value the same as the isolated areas is still not present in the combination. Therefore, reconsideration of the rejected claims 12 to 15 and their allowance are respectfully requested.

Applicants respectfully request reconsideration of the rejections set forth in the Office Action of April 29, 2008.

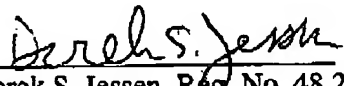
In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

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PAGE 11/11 : RCVD AT 10/29/2008 7:30:20 PM [Eastern Daylight Time] : SVR:USPTO-EFAXR-5/43 : DMS:2738300 : CSID:610 861 7540 : DURATION (mm-ss):03-48
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The Assistant Commissioner for Patents is hereby authorized to charge Deposit Account 13-3639 the fee of \$1110, which is the fee required under 37 CFR 1.136(a) to extend the period for filing a reply by three months and to charge any additional fees or to credit any excess payment that may be associated with this communication.

Respectfully submitted,

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